

Remarks/Arguments

Claims 18-19 remain pending in the Application.

Claims 14-20 were elected for prosecution as the result of a restriction/election requirement. Claims 1-13 have now been canceled. Claims 14-17 and 20 were previously canceled. Claim 19 has also been canceled.

New dependent claims 21-25 scope method claim 18 and correspond to canceled dependent claims 2, 3, 4, 5, and 11. Accordingly, no new matter has been entered, and claims 18 and 21-25 remain pending.

Claim 18 has been amended to recite the use of injection molding behind the polyurethane backing layer to form a molded plastic substrate. Support can be found in canceled dependent claim 19. Claim 18 has also been amended to recite that the backing layer does not allow strike-through of the cloth. Support can be found at page 3, lines 7-10 which recite that the backing layer does not allow subsequent downstream processes (injection molding) to strike-through the cloth layer. No new matter has been entered.

Turning to the rejection, the Examiner has rejected claim 18 as being anticipated by Gribble, et al. (United States Patent Application No. 2004/0109992).

The present invention as recited is directed at a method of forming a trim cover by supplying a cloth and applying a polyurethane dispersion as a backing layer to said cloth, without the use of adhesives or flame lamination. Claim 18 recites that a plastic substrate may be injection molded on the polyurethane backing layer without the need for a barrier film to prevent strike-through (passage of the injection molded plastic into the cloth).

The Examiner has stated that Gribble, et al. (United States Patent Application No. 2004/0109992) teaches the claimed process of applying a polyurethane dispersion to a fabric substrate without adhesives or flame lamination and equates the **molding** of a plastic substrate on said dispersion to “hot lamination molding of a polyethylene film” through a nip roller after exiting the drier oven. (See para [0011] of Gribble, et al).

Gribble, et al is silent and does not teach **molding** a molded plastic substrate on a polyurethane dispersion without the use of a barrier film applied to said polyurethane back layer of said cloth. Gribble, et al. simply recites “a substrate” but defines such as the surface to which the frothed dispersion is directly applied. (See Abstract and paragraphs [0001] and [0008] of Gribble, et al.) Gribble, et al. certainly do not teach or suggest **injection molding** behind (on) a polyurethane dispersion and not requiring a barrier film to prevent strike-through of the molten plastic through the fabric layer. Molding processes such as shoot-behind (injection molding) is recited at page 3 lines 7-10, page 4 lines 10-15, page 8 lines 13-19 and page 10 lines 10-12 of the specification.

In [0007], which the Examiner cites, Gribble, et al. is actually describing a process that “**avoids the need**” for flame lamination, adhesive or a non-permeable layer associated **with the fabric substrate**. In other words, Gribble is teaching at this section of the disclosure that film must be placed on the fabric to prevent strike-through by the dispersion. In the present invention, it has been found that such film is not necessary, and that **strike-through from injection molding a plastic substrate behind the foam dispersion** may be avoided via the use of the polyurethane dispersion.

In paragraph [0011], Gribble, et al. describes the “hot lamination of a thin film” as a means to “enhance the coefficient of friction at the surface” of the foam. In other words, laminating a thin film to the backside of the foam. As alluded to above, this should not be confused with the injection molding of a plastic substrate to the foam dispersion by what may be understood as a “shoot-behind” molding process. Again, Gribble is silent regarding **injection molding behind** the dispersion layer.

Turning to the 35 U. S. C. 103(a) rejection, the Examiner has rejected claims 18-19 as being unpatentable over Gill et al. (USP 5,124,368) in view of JP 02-143842.

The Examiner has characterized Gill et al as “forming a trim panel including providing a laminate having a fabric with a polyurethane foam layer backing, placing said laminate in a mold and injecting a foam, which injection is equated with molding of a plastic substrate. It is not believed that it is at all proper to stretch Gill et al and conclude that Gill et al’s step of injecting a foam is equivalent to injection of a plastic substrate.

Gill et al. actually discloses the “pouring-in-place” of polyurethane formulations comprising “fluid reacting intermediates” behind an exterior covering, such as a fabric backed by a foam layer. See, column 11, lines 16-47 wherein Gill et al sets forth the details of his “Pour-In Fabric Molding.” Therefore, it must be appreciated that Gill et al was only prepared to expose his fabric backed foam layer to another layer of “poured in” foam and that such a system would provide no strike through. This does not teach or suggest, however, that one could utilize a cloth and a polyurethane dispersion and injection mold behind the polyurethane dispersion (at relatively higher pressures as compared to a “poured-in” system) without the use of a barrier film, to control strike-through.

Furthermore, the poured-foam density of Gill et al, as recited in Table III, is at values between 2.25-2.50 pcf. This is relatively low density and commensurate with a poured foam system. Such does not represent a backing of an injection molded plastic substrate.

Turning to the secondary reference of JP 02-143842, this disclosure appears to be directed at applying a filled resin dispersion of polyurethane **to a surface sheet**. The reference is silent as to injection molding a plastic to said dispersion layer without the use of barrier film (amended claim 18).

Taken alone or in combination, neither Gill et al, nor JP 02-14382 teach or suggest **injection molding behind said polyurethane (dispersion) backing layer to form a plastic molded substrate on said polyurethane (dispersion) backing layer of said cloth.**

Finally, the Examiner has rejected claim 19 as being unpatentable over Gribble et al. in view of Applicants' Admitted Prior Art. The Examiner in item 7, page 4 of the Final Office Action mailed November 7, 2005 admits that Gribble et al. "does not teach injection molding a plastic layer to said foam backed fabric". Applicants' Admitted Prior Art, identified by the Examiner as page 1 lines 24-27 of the application, recites "[a]n alternate method uses the laminated cloth, particularly a knitted version, applied directly to a mold and shaped by vacuum or by the subsequent injection of **liquid foam precursors** (emphasis added) on the foam layer." This section of the specification goes on to point out that this was reference to "pour-in-place" processes as described in U.S. Patent Nos. 4,806,088 and 4,046,611 and 4,637,689. This is simply not a reference or admission that prior art existed with respect to injection molding of a plastic substrate to cloth having a polyurethane dispersion as a backing layer without the use of a barrier film.

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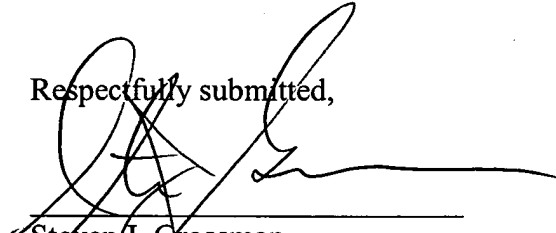
None of the cited references, nor the Applicants' Admitted Prior Art, taken alone or in combination, teach or suggest **injection molding behind a polyurethane (dispersion) backing layer to form a plastic molded substrate on said polyurethane (dispersion) backing layer of a cloth.**

In consideration of the amendments to the claims and the remarks hereinabove, Applicant respectfully submits that all claims currently pending in the application are believed to be in condition for examination. Allowance at an early date is respectfully solicited.

In the event the Examiner deems personal contact is necessary, please contact the undersigned attorney at (603) 668-6560.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 50-2121.


Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service First Class Mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 7, 2006, at Manchester, New Hampshire.

By: 
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